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Multidimensional Assessment of Globalization at the Level of a Company (Sectors)

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Abstract

This article defines the essence of global companies and global markets. Based on the provided analysis of the signs of global companies and global markets in literature, specifications which can be used to determine the level of globalization of companies and markets are proposed. A methodology of assessing the level of globalization of companies and markets is developed. Additionally, levels of globalization of the largest companies that manufacture tobacco products, automobiles, banking services, as well as globalization levels of relevant industry markets are reckoned.

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Keywords: global companies; global markets; company globalization index; index of market globalization; multi-dimensional medium; standardization.

Introduction

Globalization is one of the major megatrends of modern economic development (Bazylevych, (2013). Economy globalization is accompanied by a complex interplay of structural interdependence of national economic complexes, an increase of cross-border movement of goods, services, capitals, intensive exchange of information, technology, etc. (Grazhevskaya, 2008). Over centuries we observe conflicting separation trends of economic agents and their merging into one single market. Firstly, a market had extended far beyond city borders and received regional significance, then economy market has embraced a national level, then national markets have become only a segment of the world market, and today, as a result of economy internationalization, companies perceive the world as a single market. In fact, levels of globalization reflect the evolution of market relations: individual companies,

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industry markets of individual countries and the world.

Levitt (1983) is one of the first to analyze the economic globalization as a pure market phenomenon. The differences between multinational and global competition were first described in Hout, Porter, and Rudden (1982). Porter has given the widest description of global markets and directions of increasing competitiveness of national economies under conditions of globalization (1980, 1982, 1986, 1990, 1998). The essence of companies' global competitive strategies are set forth in the works of Porter (1980, 2011); Yip, Loewe, and Yoshino (1988); Azevedo and Bertrand (2001); Inkpen and Ramaswamy (2006), Mauri and Sambharya (2001), Qian and Li (2002), Spulber (2007), Kotabe and Murray (2004), Peng (2013), Schuler, Jackson and Tarique (2011), Hamel and Prahalad (2012), Rugman, Oh and Lim (2012) and others. However, literature does not define the essence of a deep global market and a global company as well as it does not describe their characteristics that would allow to assess a scale of company's involvement in global relations, global market levels where such companies operate. It is important for a global strategy and competitive behavior formation of a firm, increase of its competitiveness and its financial level.

The research object is global companies and markets, in particular, of tobacco and automobile industries and bank service market.

The research aim is the definition and evaluation of markets and companies globalization which necessitated the solution of the following research tasks: to determine the essence of global company; to develop a system of evaluation indices to determine company and market globalization level, carry out evaluation and position companies and markets by levels of their globalization.

1. Literature review and main definitions

1.1. Definition and characteristics of global competition and global company

At the bottom of company globalization lie competitive relationships between two companies. The causes of competitive relations globalization and changes of companies' strategy from transnational to global are the following (Levitt, 1983): profound transformations in technology, especially, in communications and information; formation of uniform consumer preferences in most countries, despite possible cultural differences; standardization of consumer products; emergence of global industries and markets.

K. Omaye draws similar conclusions and identified the following causes of globalization of competitive relations (Omaye, 1987): formation of more homogeneous market of potential "global goods"; emergence of transnational customer segments attractive for international companies; the need to sell new products simultaneously in all markets; ensuring the reduction of high production cost of goods only on a scale of global market. Porter identifies trends and external factors of competition globalization (Porter, 1980).

Based on the analysis we will determine the factors that impact formation and development of global industrial markets:

1. Technological change in the functioning of industries:

- development of information technology based on microelectronics and telecommunications;
- dramatic cost reduction of processing, storage and transmission of information;
- expansive use of microelectronics in various products and systems, including automobiles, medical equipment, household and industrial instrumentation, telecommunications.

2. Economic advantages of market boundaries expansion:

- additional effect of production, marketing, advertising scale, etc.;
- the need to sell new products simultaneously on all markets due to the opportunities for rapid development of analogous products by competitors;
- erasing differences between countries in such areas as income, cost of inputs, energy, marketing techniques, channels of distribution;
- development of new means of goods transportation and reduction of transaction costs;
- increase of production output due to a scale of effect action and finding markets for these products.

3. Changes in tastes and preferences of consumers:

- similarity of consumers' preferences around the world, leading to the standardization of products in markets;
- formation of transnational customer segments;
- complete awareness of the products created worldwide by advertising via Internet ;
- cost reduction, including time spent on traveling between countries and continents;
- high impact of advertising on creation of a standardized demand worldwide.

4. External factors:

- reduction of differences between economic and social conditions in different countries;
- liberalization of foreign companies' access to markets;
- removal of barriers to market access by states and so on.

Porter was one of the first who suggested the scheme of firms division on multi-domestic and multi-local. The differences between them are shown in the Table. 1.

Table 1. Characteristics of multi-local and multi-domestic companies according to M. Porter

Characteristics	Companies	
	multi-local	multi-domestic
Market that it serves	multi-local	global
Company strategy	different strategies applied for foreign markets	it is centralized, but different aspects of operational data are decentralized or centralized depending on situation
Competition	between companies on certain national markets	takes place between the global system of production and marketing resources of different multinational companies
Company subsidiaries	function as strategically independent subdivisions, the operational activity of which is autonomous	can specialize on production of only a certain part of the range of products, exchanging with other subdivisions of the system
Headquarters of the companies	coordinate financial management tools and marketing policy, they can centralize part of scientific research, developments, design, and manufacturing of individual components.	have an international nature, it is the driving force behind an organization that increasingly goes beyond the traditional functions: representation, management and coordination.

Source: authors' compilation from Porter (1998)

Generalized approaches to defining global company are represented in the work of Azevedo and Bertrand (2001). The authors have identified two main areas of global company research: the first - highlight structural aspects of the organization (Bartlett and Ghoshal (1989)), the second - is closer to the logic of strategic management, considers the patterns of competition and market characteristics to identify a global industry. According to the second approach a global company has no meaning (Yip, 1995; Hout et al., 1982; among others).

Nowadays companies should be global to stay competitive. However, many global markets are still developing and, thus, companies are functioning in conditions of local trends, such as local tastes and habits of consumers, considering government and regulatory authorities which expect a company to have the ability to respond and adapt to local and global changes, such as scale effect, uniform consumer demand, global competition, homogeneity of products, which requires global integration and standardization. Each of these variables may be considered as strong or weak. Accordingly, four types of environment in which a company may find itself, have been distinguished (Goshel, 1993).

The differences between strategies of global and multi-local companies are given in the Table. 2.

Table 2. Description of strategies of global and multi-domestic companies

	Companies	
	multi-domestic	global
Areas of application	Target countries and trade regions	A wide coverage of countries that are considered the most important target markets

Business strategy	In compliance with conditions of each country there is a slight coordination as to duration or its complete absence	A common basic strategy across the world. Slight adjustments to certain conditions if needed
Product manufacturing strategy	Products are oriented to the local demand	Standardized products on the markets of all countries
Production strategy	Location of factories in different countries	Location of factories with the purpose of gaining the competitive advantage in global markets: in countries with lower costs of resources, that provide minimization of transportation costs, that are close to the main markets or, in general, application of a small number of large factories to generate economy on the total scale
Supply sources of raw materials and components	The advantage is given to local suppliers	Suppliers from all countries of the world with the purpose of minimization costs
Decision making	In a decentralized manner	Centralized

Source: authors' compilation from Porter (1998)

A global strategy is effective when differences between countries are small and competition is global. It has advantages in terms of scale effect, cost reduction, activity coordination, and speed of product development.

We define a **global company** as a company that is characterized by a network of independent structural units that sell standardized products and buy resources around the world, has a brand and a network of complementary products, a single strategy and based in, independent from a country, headquarters.

1.2. Definition and characteristics of global markets

Nowadays, there is no clear definition of what global industry and global market is. That creates a serious obstacle to establish a system of evaluation of industries and markets globalization. Here are some of mostly broaded definitions.

The signs of global markets are, firstly, globalization of multinational companies due to changes in business strategy, and secondly, a sale of standardized and high-tech products around the world (Levitt, 1983).

A global industry is an industry in which a firm's competitive position in one country is significantly affected by its position in other countries or vice versa (Porter, 1986.)

These interpretations do not provide a complete picture of what a global industry is, what characteristics it has and how to determine the degree of globalization. Firstly, a bright feature of today's global marketplace is existence of networks, both from consumers and producers sides. Based on a network distribution of information and knowledge, development of such processes as internationalization of economic life, global system of market relations between economic entities develops a new character. A completely new system of global market is developing, changing forms and methods of competition between firms. However, not every network market will become global. Secondly, the Porter's definition is very similar to the definition of an oligopoly market and we can agree with the fact that global markets usually tend to have an oligopolistic structure, but not all oligopolistic markets are global.

Inkpen and Ramaswamy offer the following features of multi-local and global industrial markets (Inkpen and Ramaswamy, 2006) (Table 3).

Table 3. Characteristics of global and multi-local industry markets

Feature	Industry markets	
	Multilocal	Global
Products are sold	on international markets	on international markets
Companies serve	predominantly the country or regional consumers	consumers all over the world
Company subdivisions	have a high degree of autonomy in many countries	have a high degree of autonomy in many countries, subdivisions are created on the markets where their major competitors are based
Competitors	are not necessarily present in all major markets	are the same companies in all major markets
Competitive relations	exist between entities of two countries or on the regional level	are revealed on the global scale

Strategic position of a company in one market	does not influence its positions in other markets	fundamentally influences its positions in other markets
Company headquarters	connected to the country where it is based	does not depend on the country where it is based
Chains of cost formation	are created within the country where the company is founded	are created in optimal locations
Purchase of resources	on the regional level	around the world
Formation of company advantages	within the country or on the regional level	a combination of advantages created on local markets with those that are the result of international cooperation (economies of scale and transferrable brand image) Leading companies provide the same type of benefits in all markets (companies with benefits in country A have the same advantages in countries B, C, etc.)

Source: compiled from Inkpen, Ramaswamy, (2006)

So, the characteristics of global industry include: global talent pool, cross-border teams, global communication channels. Systematized signs of global industrial markets and global companies are listed in the Table 4.

Table 4. Characteristics of global markets

		Object	Manifestation
Companies	Resources:		
	technologies	deep transformations, development of microelectronics	
	communication	expansion, global communication channels	
	information	broadening due to microelectronics and telecommunications	
	purchase	all over the world on the basis of networks	
	human resources	global human resources reserve, trans-border teams	
	Expenses	reduction in transaction costs	
	Company subdivisions	- united in networks; - have a high level of autonomy in all countries; - are created on the markets where major competitors are based; - can specialize on manufacturing only of a certain part of the product range	
	Company headquarters	do not depend on the country they are based in	
	Efficiency	Economy of scale (reduction of cost with an increase in the scale of production and volumes of output) in manufacturing, sales, advertising, etc.	
	Chains of cost formation	Created in optimum locations based on networks	
	Products	- standardized; - obligatory brand availability; - existence of a network of complimentary products	
	Product realization	Branched infrastructure of product sale	
	Company strategy	is centralized, while different aspects of operational data are decentralized or centralized depending on the situation	
	External activity	Increase in volumes of trade, foreign private direct and portfolio investment, investment income and payments	
Consumers	Advantages	- formation of common consumer preferences in most countries; - transnational consumer segments; - increase in the number of participants in the consumer network; - perfect awareness of the products created worldwide through online advertising; - strong impact of advertising on creation of standardized demand worldwide	
	Geographical limits	- coverage of the maximum possible number of national and regional markets; - selling products on all markets simultaneously	
Competitive relations	Strategic position of a company in one market	strategic positions of competitors in major geographic or national markets depend on their positions in other markets	
	Competitors	the same companies and brands in all major markets	

Source: compiled by the authors

Thus, we believe, that a global market is a market which, at the same time, has the following characteristics: 1) global companies, consisting of a network of autonomous structural units which sell standardized products and buy resources around the world; 2) transnational consumer segments formed on the basis of common consumer preferences in most countries and have complete awareness of products via advertising and Internet; 3) competitive relationships cover the maximum possible number of national and regional markets in which goods are sold simultaneously, having the same brands and strategic positions of competitors in major geographic or national

markets depending on their position in other markets.

In this context, it is possible to provide a definition of a global market. **Global market** is a market in which global companies sell standardized products worldwide and competitive relations cover all the markets and are based on strategic interaction between firms.

2. Research methodology

The result of preliminary findings which are obtained in the course of theoretical and methodological description of global processes and economic globalization, create an objective basis of their distribution in the world.

Based on the descriptive analysis of globalization components, two-tiered approach is proposed for the development of globalization level evaluation:

- with a view to evaluate company's globalization level;
- with a view to determine a degree of market globalization represented by relevant companies.

This approach is conditioned by: firstly, the neediness to position companies in terms of their participation in globalization of markets and globalization processes within companies, and secondly, the neediness to position sectoral markets in statics and dynamics in terms of the influence of globalization penetration and spread on them, and, thirdly, the existence of specific indicators to measure the level of globalization of companies and markets, and inability to use the same set of indicators for global markets in different sectors of economy.

The indicator system was developed based on economic essence of the subjects and objects of globalization with an allowance for specific features that can characterize a global company and a global market (see Table. 3).

The subjects of globalization are companies and facilities, relevant field market areas presented by these companies.

Particular attention should be paid to distribution companies, which, in turn, may have specific features that are not typical for non-network companies. In this context, it is worth to make a note: a network company, in its essence, is a global company but distribution is not required to position such company as being global.

Thus, the hierarchical system of indicators of globalization can be represented as follows (Fig. 1). The developed system of parameters can resolve problems usually associated with outcomes of globalization:

1. Determine a level of companies' globalization and position a company in a market according to the level of its globalization.
2. Establish a typology of globalization processes occurring within individual companies based on multidimensional clustering.
3. Estimate dynamics of globalization within individual companies in order to identify a group of companies with different levels of globalization process intensity.
4. Study the influence of factors on formation of globalization on company and market levels.
5. Position markets in accordance with a globalization level and evaluate distribution intensity of global processes in selected markets.
6. Identify a typology of markets in terms of intensity of their globalization and deepening of globalization processes.
7. Carry out a comparative analysis of markets globalization represented by different industries.
8. Identify a company as global, partly global or not global.

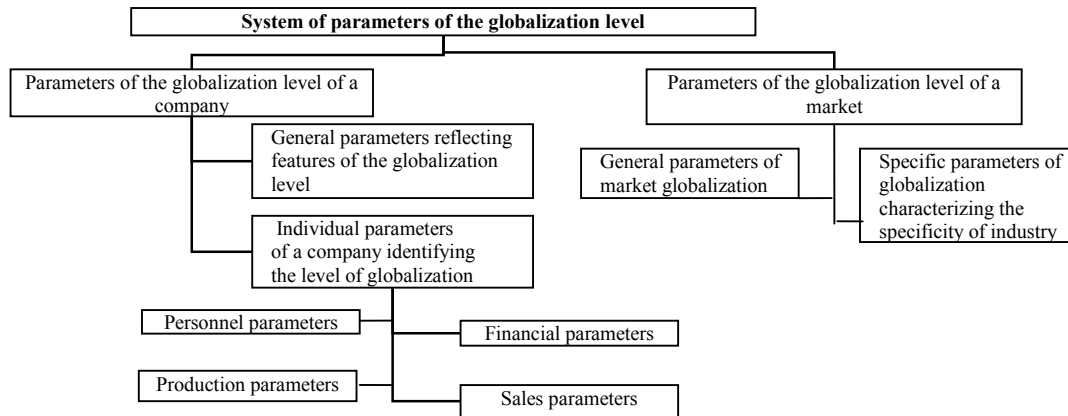


Fig. 1. Hierarchical system of globalization parameters

Let us decompose the provided system to the level of set of company's individual indices and specific market parameters of field industry that characterize the level of globalization and processes of its spread and deepening in the world (Table 5, 6).

Table 5. Decomposed system of parameters of a global company

Group of parameters	Methodology of parameter determination
1. General parameters reflecting the features of the level of globalization	1.1. Number of markets covered by the company (geographically).
	1.2. Share of covered markets (in the total number of geographic markets).
	1.3. Number of individual subdivisions (offices) in other countries – the number of subsidiaries (affiliates) beyond the country the company is based in.
	1.4. Share of the national market allotted to the company.
	1.5. Share of the world market allotted to the company.
	1.6. The level of consumer coverage – number of consumers serviced by the company in the total number of consumers.
	1.7. Efficiency of the effect of scale – the cost of sales of the company in the total volume of sales of corresponding products (services).
	1.8. Inclusion into the world trade – share of sales beyond the country of location in the total volume of sales.
	1.9. Branching of the network – the total number of outlets (a sum of offices and outlets).
	1.10. Number of brands
	1.11. Level of branding – the share of brand products in the total volume of products (by nomenclature, by volumes of sales)
	1.12. Number of trade marks
	1.13. Level of coverage of major markets – the share of sales in major markets in the total volume of sales.
	1.14. Ratio of coverage of major markets – the number of big markets in which the products of the company are realized to the total number of big markets.
	1.15. Level of international competition – average number of foreign competitors
2. Individual parameters of a company determining the level of globalization	2.1. Personnel parameters:
	2.1.1. Share of foreign staff in the company – number of foreign professionals from countries other than the country of company location in the total number of hired staff
	2.2. Production parameters:
	2.2.1. Number of countries where resources are purchased
	2.2.2. Level of standardization of the products – share of the standardized product in the total volume of products
	2.2.3. Company warehouse areas
	2.2.4. Company trade areas
	2.2.5. Level of production innovativeness – intensity of renewal of non-working assets
	2.3. Financial parameters:
	2.3.1. Level of internationalization of the capital – share of foreign direct and portfolio investment in the total cost of assets

2.3.2. Share of foreign assets in the total assets
2.4. Parameters of sales:
2.4.1. Chain parameters – the number of links from production to end-consumption
2.4.2. Availability of own logistics
2.4.3. Representation of products in online-shops – average daily number of online product orders
2.4.4. Online representation – average daily attendance of the company website
2.4.5. Level of advertising beyond the country of company location – the share of expenses on promotion beyond the country of location in the total amount of advertising costs

Source: compiled by the authors

Table 6. Decomposed system of parameters of the global market

Group of parameters	Methodology of parameter determination
1. Summarizing parameters of market globalization	1.1. Share of market coverage by global companies in the total volume of the market
	1.2. Level of localization and concentration of global companies in the market
	1.3. Average level of consumer coverage – number of consumers serviced by global companies in the total number of consumers
	1.4. Number of network companies in the market
	1.5. Average number of brands in the market
	1.6. Average level of branding – share of brand products in the total volume of products (by nomenclature, by volumes of sales)
	1.7. Average number of trade marks
	1.8. Average level of coverage of big markets by global companies – share of sales by global companies on big markets in the total volume of sales
	1.9. Ratio of big markets coverage– number of big markets in which products of global companies are sold to the total number of global markets
	1.10. Average number of individual subdivisions abroad (beyond the country of company location)
	1.11. Average number of foreign competitors in the market – average number of competitors' countries-companies
	1.12. Availability of substitute products
	1.13. Product standardization
	1.14. Level of market capitalization of the global companies in the market
	1.15. Level of internationalization of the workforce in the market
2. Specific parameters of the level of globalization characterizing the specific features of industry markets	Decomposition of the system of parameters for an individual market requires considering its specific features that should be determined with the specifics of structure, market functioning and product set taken into account. In this context, it is clear that this group of parameters requires special development for each market, which goes beyond the objectives of the present study

Source: compiled by the authors

Clearly, it is impossible to resolve the set tasks only on the basis of the proposed system of indices: it requires the development of a unified methodology that would allow to develop a coherent system of evaluation not only to define a level of company and market globalization, but also to determine the intensity of penetration and dissemination of global phenomena in today's global environment, and will also provide spatial and temporal comparability of global processes.

Partial integral estimates, according to the components of globalization, should be put on the basis of methodology that would then give the possibility to determine a consolidated integral evaluation of globalization level.

Each system index of integrated assessments is independent and at the same time is a part of generalized characteristic. Since the values in the system are different in their dimension, it requires normalization (standardization) of all primary indicators. In the course of standardization, individual index values are replaced by relative values. Then a question may arise as what to take as the norm. As it is well-known, the evaluation may be based on a maximum achieved level of any index, or minimum level, based either on average level, reference level or magnitude of variation. During standardization we should also bear in mind that the indicators characterizing the level of globalization are presented as stimulants (indices, which growth would characterize positive dynamics, such as, for example, the level of inclusion into global trade and destimulators (indicators, the growth of which is characterized by negative changes such as, for instance, linearity).

The best value, that is reached by companies or relevant markets at the current moment and then fixed, should be laid down as a principle of standardization that, in turn, should become a base of methodology for globalization evaluation. Accordingly, for stimulants it would be the maximum achieved value, and for destimulators - minimum

index rate. Partially integrated assessment for companies (multivariate average) is calculated as a weighted arithmetic meaning by the formula of arithmetical average simple for standardized assessment.

Thus, a comparability of companies and markets globalization can be achieved by components that would give an opportunity to limit the level of assessment variation from above and from below and enable us to identify a level of globalization by relevant group indices of companies and markets. Hence, taking into account the above mentioned, a normalized assessment varies from 0 to 1 with the interval width of 0,(3) units. In addition, the application of this method allows interpreting the received figures. With this aim, an appropriate scale to assess the level of globalization in relation to the maximum achieved level has been developed (Table 7). If in future the situation improves, the integrated assessment will increase, indicating deepening and spread of globalization processes.

Table 7. Scale of assessment of the globalization level of markets and companies according to the maximum level achieved

Scale as regards to the maximum	Level of market globalization	Level of company globalization
0,000-0,333	low	non-global
0,334-0,666	average	partially global
0,667-1,000	high	global

Based on the partial integrated assessments of companies we can define a consolidated integrated assessment for specific groups of companies by the formula of arithmetic average according to level of market capitalization or the role of a company in a global market, based on the share of a company in the world market or in a corresponding group of global companies.

Thus, the calculation of integrated assessments has a hierarchical structure and based on different principles, namely the unweighted and weighted ratings:

- for companies and markets - the unweighted arithmetic mean .
- for groups of companies – arithmetic mean weighted according to the level of capitalization or structure of sales.

3. Estimation results

To evaluate company globalization and industrial markets they represent, 16 leading companies, leaders of Forbes Global 2000 Leading Companies in 2014 (an annual world ranking of companies) are selected. The list of companies and their ratings are presented in Table. 8.

Table 8. The world's biggest tobacco, auto and regional banks companies

Company	Symbol Company	Rating
Philip Morris International	FM	157
Japan Tobacco	DT	209
Imperial Tobacco	IT	283
British American Tobacco	BAT	173
Volkswagen Group	WG	19
Toyota Motor	TM	12
Daimler	D	31
Ford Motor	FM	47
BMW Group	BMW	48
General Motors	GM	67
HSBC Holdings	HSBC	14
Bank of China	BC	9
China Construction Bank	CCB	2
Agricultural Bank of China	ABC	3
Goldman Sachs Group	GSG	59
American Express	AE	104

Source: compiled from Forbes 2014 Global 2000 Leading Companies The World's Biggest Public Companies

To ensure comparability of indices and unity of methodology when developing integrated assessment index of globalization from the above given list of indicators, only those ones have been selected that can be standardized, so that a standardized assessment could be normalized, thus, couldn't go beyond 100% or acquire values 0 or 1. Moreover, it should be noted that a part of the given indices can be assessed only by companies themselves, as this

is confidential information, such as, for example, Internet representation. As a result, taking into account, the above required specificity, 15 indicators, which can satisfy the following conditions, have been selected for integrated assessment of globalization index:

- index can be standardized;
- standardized assessment has limitations, i.e. normalized;
- attributive feature takes two values that can be represented through 0 or 1.

Thus, globalization index includes the following indicators that meet the above mentioned conditions (Table 9).

Table 9. Indicator system of global companies to be included in the calculation of globalization index

Index	Methodology to determine a standardized index	Normalize availability
1.2. Market coverage share (the total number of geographic markets)	THE NUMBER OF COUNTRIES WHERE_COMPANY IS REPRESENTED divided by THE TOTAL NUMBER OF COUNTRIES (here 258)	Maximum 100%
1.3. Coverage ratio : the ratio of separate units (offices) in other countries and the number of markets , which company encompasses	THE NUMBER OF BRANCHES OUTSIDE THE_COUNTRY OF DEPLOYMENT divided by THE NUMBER OF COUNTRIES WHERE COMPANY IS REPRESENTED	Maximum 100%
1.4. National coverage ratio: company share of national market	SALES VOLUME OF A COMPANY divided by THE TOTAL VOLUME OF SALES IN A COUNTRY	Maximum 100%
1.5. Representation ration in the world: company share of the world market	SALES VOLUME OF A COMPANY divided by THE TOTAL VOLUME OF SALES IN A COUNTRY	Maximum 100%
1.8. Inclusion in world trade: share of sales outside the country in total volume of sales	COMPANY SALES OUTSIDE THE COUNTRY OF DEPLOYMENT divided by TOTAL SALES OF COMPANY	Maximum 100%
1.10. The number of brands	REQUIRES STANDARDIZATION FOR MAXIMUM AMONG COMPANIES OF ONE INDUSTRY	Maximum 1
1.11. Brand level: share of branded products in total production (based on range and terms of sales	THE NUMBER OF BRANDS divided by THE TOTAL NUMBER OF PRODUCTS BY RANGE	Maximum 100%
1.14. The coverage ratio of major markets : the number of large markets where products are sold to the total number of major markets	THE NUMBER OF BIG MARKETS WHERE COMPANY IS REPRESENTED divided by THE TOTAL NUMBER OF BIG MARKETS	Maximum 100%
1.15. The level of foreign competition - the average number of foreign competitors	REFERENCE TO COMPARE A LEVEL OF COMPETITION	-
2.1.1. Share of foreign staff in the company	THE TOTAL NUMBER OF FOREIGN SPECIALISTS divided by THE TOTAL NUMBER OF PERSONNEL	Maximum 100%
2.2.1. The number of countries where resources are purchased	REQUIRES STANDARDIZATION FOR MAXIMUM AMONG COMPANIES OF ONE INDUSTRY	Maximum 1
2.2.2. Product standardization level: the share of standardized products in total production	THE NUMBER OF STANDARDIZED PRODUCTION divided by THE TOTAL NUMBER OF PRODUCTS BY RANGE	Maximum 100%
2.2.3. Own storage spaces (facilities) *	PRESENT– 1; ABSENT – 0	1 or 0
2.3.1. The level of capital internationalization - share of foreign direct and portfolio investment in total assets	VOLUME OF FOREIGN CAPITAL INVESTMENT divided by TOTAL ASSET VALUE	Maximum 100%

2.3.2. The share of foreign assets in total assets	VOLUME OF FOREIGN FUNDS divided by TOTAL ASSET VALUE	Maximum 100%
2.4.2. Availability of own logistics *	PRESENT – 1; ABSENT – 0	1 or 0

*) not for all companies

Source: compiled by the authors

The derived indices of companies' globalization in Table 10 and markets Table 11 make it possible to position companies and markets in terms of their globalization. In addition, for better comparison, the table 10 shows a 16-rank rating scale by Forbes Global 2000 Leading Companies rating.

Table 10. Companies' rating according to the level of globalization

Company	Index of company globalization	Rating	Level of globalization	Forbes Global 2000 Leading Companies rating (recounted)
FM	0,801	1	High	13
DT	0,666	2	Average	15
IT	0,560	7	Average	16
BAT	0,616	4	Average	14
WG	0,655	3	Average	6
TM	0,549	8	Average	4
D	0,534	10	Average	7
FM	0,467	15	Average	8
BMW	0,482	13	Average	9
GM	0,576	5	Average	11
HSBC	0,537	9	Average	5
BC	0,518	11	Average	3
CCB	0,571	6	Average	1
ABC	0,487	12	Average	2
GSG	0,481	14	Average	10
AE	0,426	16	Average	12

Source: compiled by the authors

The check for the consistency of ratings showed that Spearman rank correlation coefficient is (-0.27), indicating that consistency of ratings is unproven where a minus symbol indicates difference in positioning of companies in terms of one parameter and using a system of indices. In this context, the conclusion is that the use of some criteria to position the company as being global is found insufficient. This approach leads to conflicts that arise in different rankings for different criteria, making it impossible to have an objective and holistic perception of company's involvement in the process of globalization.

Table 11. Markets rating according to the index of globalization

Market	Index of market globalization	Rating	Level of globalization
Tobacco	0,705	1	High
Automobiles	0,561	2	Average
Bank service	0,549	3	Average

Source: compiled by the authors

Following the results of globalization level evaluation of markets, the company's first top positions are occupied by markets that historically have had limited competition. Thus, if talking of tobacco market, the major competitors in this market are only 4 companies. If we evaluate the market of bank services, the competition is very tough, and the level of competition is incomparable to the tobacco market and, even, to automobile market – it accounts for about 5,100 companies - competitors.

Discussion

This article is a continuation of the authors' research on the determination of an essence of global markets and global industrial companies, as well as on evaluation methods of markets and companies globalization (Ignatyuk, 2009, 2010; Kovtun, Ignatyuk, 2013; Bazylevych et al., 2014). The technique of estimation based on the selection of

indicators that can be used in practice has been improved. This enabled us to assess the level of globalization of such markets as tobacco, automobiles and bank services.

The study concluded that the existing definition of global market does not provide a complete picture of what it is, what its characteristics and what indices should be taken into account when assessing the degree of globalization. Firstly, a bright feature of today's global marketplace is the existence of networks from both consumers' and producers' sides. However, not every network market can be considered global. Secondly, Porter's definition is very similar to the definition of an oligopoly market and we can accept the fact that global markets tend to have an oligopolistic structure, but not all oligopolistic markets are global.

It has also been shown that the use of one or more criteria for positioning the company as a global is insufficient. This approach leads to conflicts that arise in different rankings for different criteria, making it impossible to have an objective, systematic and holistic perception of company's involvement in the process of globalization. Therefore, a systematic approach to the criteria selection to measure companies and markets globalization level has been suggested.

Following the results of evaluation of markets globalization level, the company's first top positions are occupied by markets that historically have had limited competition.

Conclusions

According to the study, the following features of the multi-dimensional evaluation of the globalization of companies and industry markets have been established:

1. The developed hierarchical system of market globalization indicators proposed by Porter requires adaptation based on industry's characteristics, level of confidentiality, availability, and the possibility of obtaining a normalized index. Thus, from the whole list, only 15 indicators describing the most important manifestations of globalization have been chosen to establish an integrated assessment of globalization index.
2. Globalization index for individual companies has been calculated based on multidimensional unweighted arithmetic average which showed that the system of statistical indicators increasingly makes it possible to consider the manifestations of global processes. As a result, the obtained ratings contradict the ratings that are developed on the basis of individual indices. Thus, in one single index, essentially, various aspects of a company are drawn together, claiming their global positioning.
3. Sectoral globalization index can be calculated based on individual assessments of globalization level of certain companies that are leaders in a market, through an appropriate weighting of individual assessments by market share included in the index of industry globalization. This approach does not require collecting of separate information that characterizes a particular industry market, which results in great simplification of evaluation and provides an opportunity to receive timely information about the level of industry globalization.
4. According to the evaluation of field globalization level, the conclusion is made that the most globalized markets, historically, are more developed and face less competition. That is why bank services are much less globalized than tobacco markets and outrank car market, which is also, in terms of global processes, is rather modern.

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